REMARKS

Reconsideration of the above identified application in view of the preceding amendments and following remarks is respectfully requested. Claims 1-14 are pending in this application.

In the Office Action, Claims 1-14 were rejected under 35 U.S.C. § 103 (a) over U.S. Patent No. 6,549,240 to Reitmeier.

Reitmeier discloses a format and frame rate conversion for display of 24Hz source video within the context of a digital television. The digital television has a video processing section including a video decoder 120. The video decoder 120 receives a video stream S2 in a standard manner and produces a decoded video signal S4 having a given transmission format and frame rate. An optional de-interlacer 130 converts the video signal from an interlaced format to a progressive scan format. A vertical resizer 140 and a horizontal resizer 150 are used to convert the picture format. The resized and de-interlaced signal is fed into a frame buffer 160 for storing the video information.

As noted by the Examiner, Reitmeier does not disclose a video decoder that acts on the video signal with graphical picture elements and text characters. The Examiner took Official Notice that overlaying graphical picture elements and text characters onto a video signal, as claimed, is a very well known procedure in the art and, thus, an artisan would be motivated to implement this feature in Reitmeier's apparatus to arrive at the claimed invention. For support of the Official Notice, the Examiner provided U.S. Patent No. 6,608,128 to Hanafee et al.

The applicant's respectfully submit that Hanafee et al. does not properly support the assertion of Official Notice. Overlying graphical picture elements and

textual characters onto a video signal is a convenient way to provide information to a viewer, e.g., particularly in analog televisions. Hanafee et al. is a typical example of how such overlay of graphical pictures and textual characters is accomplished in analog televisions.

Hanafee et al. disclose an arrangement having a tuner that receives a program signal and creates a corresponding video signal (see Figure 1). A computer 11 receives information signals and creates a picture image signal. The picture image signal created by the computer 11 is further converted to a video signal by a digital video board 21. A genlock device 29 receives both signals and combines them. The combined signal drives a display 33: The step of combining the two video signals (one the TV program and the other being the textual characters or graphical picture elements) is accomplished at the end of the two signal processing chains. As a result, Hanafee et al. have the disadvantage of requiring a dedicated device, i.e., the digital video board 21, to create the analog video signal with the graphical picture elements and textual characters from the digital picture signal created by the computer 11. The digital video board 21 must create an analog video signal with a particular horizontal frequency, i.e. frame rate, that matches the properties of the tuner video signal to allow for combination of the two signals by the genlock device 29.

Hanafee et al. does not address the important issues of frame rate conversion and picture format conversion that are important in digital video processing for a digital television. When the teachings of Hanafee et al. are translated for a digital television, an additional digital tuner must be used. This extra digital tuner must be able to receive a digital program signal and create a corresponding analog output video

signal which is applicable for driving the analog display. Any frame rate conversions would need to be accomplished on the digital side, i.e. with the extra digital tuner before the analog output video signal is created. For the overlay information, the corresponding analog video signal with the required horizontal frequency is created by the digital video board. Thus, in a translated version of Hanafee et al., the adaptation of frequencies must be accomplished separately for each of the two signal paths. In view of the above, the Official Notice is not properly taken. Accordingly, the Applicants hereby seasonably traverse the Official Notice and request proper evidence in support of same in the event that the rejections are maintained.

For the sake of argument, even if the Official Notice taken by the Examiner were appropriate, the subject claims would not be rendered obvious. In particular, there is nothing in Reitmeier that discloses or suggests, in whole or in part, the signal processing unit defined by Claim 1 of the subject application. In particular, there is nothing in Reitmeier which discloses or suggests, a signal processing unit for a digital TV system including a first device which acts on a video signal with graphical picture elements and text characters to produce a first device output video signal, a second device which converts a frame rate of the first device output video signal to produce an increased frame rate video signal, and a driver stage which drives a display responsive to the increased frame rate video signal. Consequently, all graphics operations can be performed at the lower frame rate and a single circuit, i.e. the second device is used to perform the frame rate conversion because the frame rate conversion occurs at the end of the signal processing chain after the overlay of the graphical picture elements and textual characters onto the video signal. As a result, an additional circuit, e.g., the digital video board 21 of

Hanafee et al., is not required to perform frame rate conversion on the on-screen display.

Regarding Claim 8, there is nothing in Reitmeier that discloses or suggests, in whole or in part, the method defined by Claim 8 of the subject application. In particular, there is nothing in Reitmeier which discloses or suggests, a method for processing a digital TV system signal including the steps of acting on an input video signal with graphical picture elements and text characters to produce a processed video signal, increasing the frame rate of the processed video signal to produce an increased frame rate video signal, and driving a display responsive to the increased frame rate video signal. In the method of Claim 8, the order of the signal processing chain is clearly defined. The video signal is processed to include the graphical picture elements and text characters then the frame rate is increased. As a result, additional circuitry and the processing steps performed thereby caused by providing the signal adaptations separately is avoided. The teaching, suggestion or motivation for performing any frame rate conversion after the on-screen display is overlaid is not shown in any prior art of which the applicants are aware.

In view of the above, Claims 1 and 8 and each of the claims depending therefrom are not rendered obvious by the combination of references cited by the Examiner, and withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Any additional fees or overpayments due as a result of filing the present paper may be applied to Deposit Account No. 04-1105. It is respectfully submitted that all of the claims now remaining in this application are in condition for allowance, and such action is earnestly solicited.

If after reviewing this amendment, the Examiner believes that a telephone interview would facilitate the resolution of any remaining matters the undersigned attorney may be contacted at the number set forth herein below.

Respectfully submitted,

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